

Appl. No.: 10/812,770  
Amdt. Dated: November 13, 2006  
Reply to Office action of: July 14, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

**Claim 1 (Canceled)**

**Claim 2 (Currently Amended):** A multisystematic volume rendering image processing system comprising:  
a plurality of image data server computers,  
a plurality of image display units,  
one or more common volume data storage units for  
storing volume data necessary for the image display  
units, and  
a server manager for managing data copying via a  
network, wherein the image data server computers receive  
volume data necessary for formation of images requested  
by the image display units from the volume data storage  
unit via the network, process image data in accordance  
with image requests concerning angle and position issued  
from the image display units, and transmit image results  
to the image display units via the network;  
the image display units each including an input

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section and an output section transmit the image requests entered through the input sections to the image data server computers via the network, receive the image results processed by the image data server computers and output the image results to the output sections;

the volume data storage unit transmits the necessary volume data to the image data server computers in accordance with requests issued from the image data server computers; and

the server manager makes a decision to switch data processing for the plurality of image display units so that a part of the data processing performed by an operative one of the image data server computers will be replaced by data processing performed by another suspended one including a state of low load of the image data server computers. The multisystematic volume-rendering image processing system as claimed in claim 1, wherein when the server manager decides the switching, if the same volume data as the volume data handled by the operative image data server computer are not present in the suspended image data server computer as a destination

of the decided switching, the server manager performs a control function wherein the volume data from the volume data storage unit is transmitted to the destination image data server computer and additional information including scale-up factor data, angle data, and position data of the image requests is copied from the operative image data server computer to the destination image data server computer, and the destination image data server computer is made to execute the data processing.

**Claim 3 (Currently Amended):** The multisystematic volume rendering image processing system as claimed in claim 2([1]), wherein the decision to switch data processing is based on an when overload condition of the operative is imposed on computation of volume rendering which is being carried out by a first image data server computer, the server manager judges whether to make a part of the volume rendering be handed over to a second image data server computer having idle computation resources or not, and  
when a decision is made that the part of the volume

~~rendering is handed over, the server manager performs a control function wherein volume data handled by the first image data server computer is transmitted from the volume data storage unit to the second image data server computer and additional information is copied from the first image data server computer to the second image data server computer, and the second image data server computer is made to execute the data processing which is heretofore executed by the first image data server computer.~~

**Claim 4 (Currently Amended):** The multisystematic volume rendering image processing system as claimed in claim 2[[1]], wherein the server manager stores identification names of the volume data transmitted from the volume data storage unit and destination image data server computers in a memory in advance;

when the volume data storage unit is requested to send volume data, the server manager inquires of the memory whether the same volume data are already sent or not, after the volume data is sent from the volume data

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storage unit;

when the same volume data are already sent, the server manager judges whether the volume data are collected to one of the image data server computers or not; and

when a decision is made that the volume data are collected to one of the image data server computers, the ~~server manager performs a control function wherein additional information is copied to that from an image data server computer to be suspended to another image data server computer as a destination of the decided switching~~ handover of the volume data and the handover destination ~~and that~~ image data server computer is made to execute ~~the~~ data processing which is heretofore executed by the image data server computer to be suspended.

**Claim 5 (Canceled)**